

Date: Tuesday, 4/17/2007 3:39:45 PM  
User: Kim Johnston

# Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: 206 A/B HIGH GEAR SKIDTUBE
Job Number	: 31880		
Estimate Number	: 10170		
P.O. Number	: <i>N/A</i>	Part Number	: D206642212
This Issue	: 4/17/2007 S.O. No. : <i>N/A</i>	Drawing Number	: <i>N/A</i>
Prsht Rev.	: NC	Project Number	: <i>N/A</i>
First Issue	: <i>N/A</i> Type : LANDING GEAR	Drawing Revision	: <i>N/A</i>
Previous Run	: 31878	Material	: <i>N/A</i>
Written By	: <i>[Signature]</i>	Due Date	: 5/20/2007
Checked & Approved By	: <i>[Signature]</i>	Qty:	1 Um: Each
Comment	: Est Rev:K 05.07.14 ECN 847 & 901; Add Tow Ring and GHW Kit KJ/CP/JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



Comment: DOCUMENT CONTROL  
Photocopy bluefile & type labels per PPP206-642-212 CHG004

*KS 07.05.08* ①

2.0	31880A	HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B
-----	--------	-------------------------------------



Comment: Sub-Component HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B  
D206-642-241 B *31880A*

*7/5/30 59*

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1  
Pick Packing Kit

4.0	D206651041	206 A/B GHW Kit
-----	------------	-----------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Pick: Packing Kit  
Qty Part Number Description Batch  
1 D206-651-041 GHW Kit *D27963*  
1 D206-642-241(REF) *31880A*

5.0	D2652	Bushing
-----	-------	---------



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)  
Pick: Packing Kit  
Qty Part Number Description Batch  
16 D2652 Bushing *D30816*

*CP 07/05/0280*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:39:45 PM

User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 31880

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D2655

Ring



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

1 D2655

Tow Ring

B29334 ✓

7.0

D26652

Saddle, RH, Fwd,Aft, Out



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 D2665-2

Saddle

B28255 ✓

8.0

D26662

Saddle, RH, Fwd,Aft, In



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 D2666-2

Saddle

B28551 ✓

9.0

D2712

Set Screw



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

10 D2712

Set Screw

B31927 ✓

10.0

D2884

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description

Batch

2 D2884

SADDLE SPACER

B29453 ✓

11.0

D2885

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Saddle Spacer

B29199 ✓CP 07/05/280

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 31880

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

AN341A

Bolt



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN3-41A

Bolt

M104291 ✓

13.0

AN45A

Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

1 AN4-5A

Bolt

M100857 ✓

14.0

AN46A

Bolt



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

12 AN4-6A

Bolt

M10215 ✓

15.0

AN57A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN5-7A

Bolt

M102140

M100826 ✓

16.0

AN511A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN5-11A

Bolt

M104016 ✓

17.0

AN644A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 AN6-44A

Bolt

M102079 ✓

*CP 4/15/288*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:39:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 31880

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

AN960JD10

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN960JD10

Washer M104118 ✓

19.0

AN960JD416

Washer



Comment: Qty.: 25.0000 Each(s)/Unit Total : 25.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

25 AN960JD416

Washer M103691 ✓

20.0

AN960JD516

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN960JD516

Washer M103641 ✓

21.0

AN960JD616

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN960JD616

Washer M103641 ✓

22.0

MS21042L3

Nut



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 MS21042L3

Nut (or -3) M103691 ✓

23.0

MS21042L4

Nut



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

*CP 04/15/2007* ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: FE Date: 07/06/01  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Date: Tuesday, 4/17/2007 3:39:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 31880

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

12 MS21042L4 Nut (or -4) M102552X

24.0

MS21042L6

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 MS21042L6

Nut (or -6)

M101660X

EP 7/05/28

25.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

C207105129  
7/05/28

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-642-212

Location:

PPP Rev:

REV: F

EP 7/05/30

SQ

27.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

58106/01

Job Completion



C207105131

31880A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:44 PM  
User: Kim Johnston

# Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B
Job Number : 31880A	
Estimate Number : 10163	
P.O. Number : <i>N/A</i>	Part Number : D206642241
This Issue : 4/17/2007 S.O. No. : <i>N/A</i>	Drawing Number : D2650 REV E P1,3
Prsht Rev. : NC	Project Number : N/A
First Issue : <i>N/A</i> Type : LANDING GEAR	Drawing Revision : E
Previous Run : 31878A	Material : <i>N/A</i>
Written By : _____	Due Date : 5/20/2007 Qty: 1 Um: Each
Checked & Approved By : <i>[Signature]</i> 07.04.18	
Comment : Est Rev:M 04/12/02 Revised procedural steps KJ/JLM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D206-642-241 CHG003

*N/A 07.04.18 [Signature]*

2.0	D2620	Bent 206 Skidtube
-----	-------	-------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
1 D2620	Bent Tube 3" OD	<i>B 31487 BE 07-04-20</i>

3.0	D32861	Doubler
-----	--------	---------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
2 D3286-1	Doubler	<i>B 29090 BE 07-04-24</i>

4.0	D2647	Cap
-----	-------	-----



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
1 D2647	Fwd Cap	<i>B 29328 BE 07-04-20</i>

5.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
-----	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Deburr Fwd edge of tube

*BE 07-04-20*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:44 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description:

2- Remove ridge on inside of Fwd edge of tube as per Dwg D2650 *BE 07-04-20*

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod *M102421 / M103794 BE 07-04-20*

4-Grind weld flush to cap on top surface only. *BE 07-04-20*

5-Cut Aft end as per dwg 2650 from front of tube and Deburr *BE 07-04-23*

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D2650

7-Open holes for Aft end cap as per Dwg D2650 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8167.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 40 drill, spot drilling doubler at the same time.

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D2650

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D2650

15-C'sink GHW rivet holes as per Dwg D2650

*BE 07-04-24*

60

QC6

DIMENSIONAL CHECK



*fm 07-04-24*



Comment: DIMENSIONAL CHECK

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

7.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
-----	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Open crossbolt holes to Ø0.3125" as per Dwg D2650

*Pm 07-04-240*

2-Drill pilot holes using DT8028-3, then open to Ø0.297" as per Dwg D2650. Open Aft cap hole #6.

*Pm 07-04-240*

3-Deburr tube and blow out chips from inside the tube

*Pm 07-04-240*

8.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
-----	-----------------	----------------------------



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*Pm 07-04-240*

9.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
-----	-----	---



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*BE 07-04-24*

10.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
------	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D2650, D2650-3 Drilling Detail (without cutting fluid)

*Pm 07-04-240*

2-C'sink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

*Pm 07-04-240*

3-Deburr and blow out all chips from inside the tube

*Pm 07-04-240*

11.0	QC6	DIMENSIONAL CHECK
------	-----	-------------------



Comment: DIMENSIONAL CHECK

*BE 07-04-25*

12.0	CR3212404	Cherry Rivet
------	-----------	--------------



Comment: Qty.: 52.0000 Each(s)/Unit Total : 52.0000 Each(s)

Pick:

Qty Part Number Description Batch

52 CR3212-4-04 Rivet

*M101334*

*Pm 07-04-250*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Tuesday, 4/17/2007 3:40:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

D26543

206 I-Beam (Web)



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2654-3

Web

B30723

Pm 07-04-25 ①

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Locate, install and rivet doublers as per Dwg D2650. Micro-shave rivets as required Pm 07-04-25 ①

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 07-04-25 Time: 8:00am

Finish Date: 07-04-26 Time: 12:30

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291

m103561

Sikaflex expire date:

07-10-01

Pm 07-04-25 ①

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 07-04-26

16.0

D2649

Crossbolt Spacer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:

Qty Part Number

Description Batch

18 D2649

Crossbolt spacer

B31112

BE 07-04-26

17.0

D32863

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3286-3

Spacer

B29015

BE 07-05-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description:

18.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod M 102421 BE 07-04-24

2-Grind welds flush as per Dwg D2650. Pm 07-05-03 ①

3-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D2650. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE BE 07-05-10

4-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D2650. Deburr

DP 7-5-14

19.0

CCR264SS33

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 CCR264SS3-3 Rivets M103525

DP 7-5-14

20.0

M7885343

Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 M7885/3-4-3 Rivets M11872

DP 7-5-14

21.0

D2680041

Nut Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2680-041 Nut Plate B28925

DP 7-5-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM

User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

22.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install D2680-041 Nut Plate as per Dwg D2650

DP 7-5-14

23.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07/05/14 (1)

24.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07-05-14 (1)

25.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

M-L

07/05/22

(1)

26.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref. 4.3.5.1) as per QSI 005 4.3. Make sure Nut Plate Thread is protected using paint screw, and mask GHW studs.

M1103706

07-05-22

(1)

27.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07/05/23 (1)

28.0

D26483

Wearpad



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part Number

Description Batch

4 D2648-3

Wearpad

B30648

29.0

D265613

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2656-13

Wearshoe

B30553

07/05/23 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

D265621

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2656-21

Wearshoe

B29198

31.0

D265633

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2656-33

Wearshoe

B28179

32.0

D34291



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3429-1

Wearpad

B30237

33.0

ALS41032130

Insert



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

44 ALS4-1032-130 Inserts

or (see QSI 017)

M102475

34.0

AN960JD10L

Washer



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

44 AN960JD10L

Washer

M102832

FL

07/05/23 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Tuesday, 4/17/2007 3:40:45 PM

User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

MS27039108

Screw



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

Qty Part Number Description Batch

44 MS27039-1-08 Screw m103641

36.0

D26511

Plug



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:

Qty Part Number Description Batch

18 D2651-1 Plugs B31326 (14x) B31788 (4x)

37.0

D26513

O-Ring



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:

Qty Part Number Description Batch

18 D2651-3 O-Rings B31488 (14x) B29331 (4x)

38.0

MS27039406

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 MS27039-4-06 Screw m15194

39.0

AN960JD416

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 AN960JD416 Washer m103238

FL 07/05/23 (1)

40.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1]

1- Install inserts &amp; wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R Sikaflex-291 m103561

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

Sikaflex expire date: 07/10

2-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D2650 (D2650-3 detail). Clean excess adhesive.

3-Install MS27039-4-06 Screw as per DEO 9153.

FL 07/05/23 ①

41.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646

Aft Cap

B30119

42.0

MS27039108

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 MS27039-1-08 Screw

M103641

43.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 AN960JD10L

Washer

M102832

FL 07/05/23 ①

44.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date:

M103561  
07/10

2-Wing Walk as per Dwg D2650-3 and QSI 005 4.4

Batch:

M107281

FL 07/05/23 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/17/2007 3:40:45 PM

User: Kim-Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 31880A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

45.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*Ins-300*

46.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*Ins-30*

*was missing  
plugs.*

47.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206664241 IF APPLICABLE

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

*Per F 4/15/30 SL Efor/15/30*

48.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*07.05.31*

Job Completion



*W 06/15/31*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>UP</i>	DRAWN BY <i>UP</i>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <i>PH</i>	APPROVED <i>H</i>	DRAWING NO. D2650	REV. E SHEET 1 OF 5
DATE 06.03.30		TITLE 206/407 SKIDTUBE ASSEMBLIES	SCALE NTS
A	97.03.25	NEW ISSUE	
B	97.06.26	AS MANUFACTURED CHANGES	
C	97.10.29	CHANGE HOLE PATTERN AND FRONT END	
D	04.05.17	REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HNDLNG ON D2650-1/-3	
E	06.03.30	RMV C'BORE, CHG DRILL, ADD CHAMFER	

RELEASED  
16 04 17 *H*

Qty -1	Qty -3	Qty -5	Qty -7	Part Number	Description
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
16	17	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

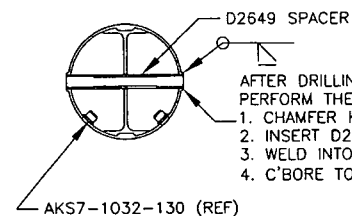
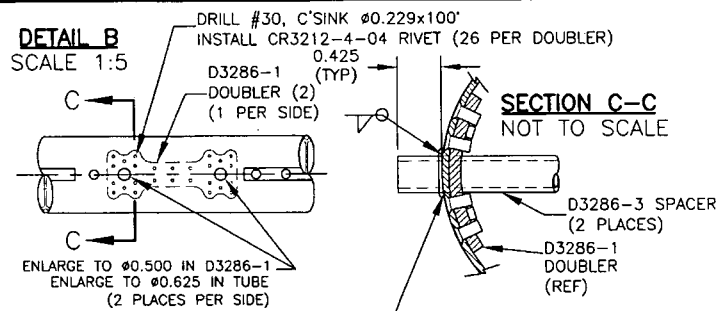
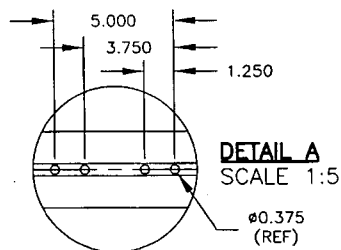
**NOTES**

- 1) WELD PER DART QSI 004
- 2) DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 3) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 4) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 5) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3  
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 6) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 7) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 31880A

Copyright © 1997 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

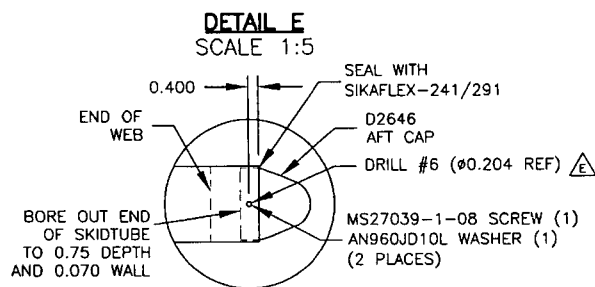


DETAIL D  
FOR 0.375 HOLES ONLY

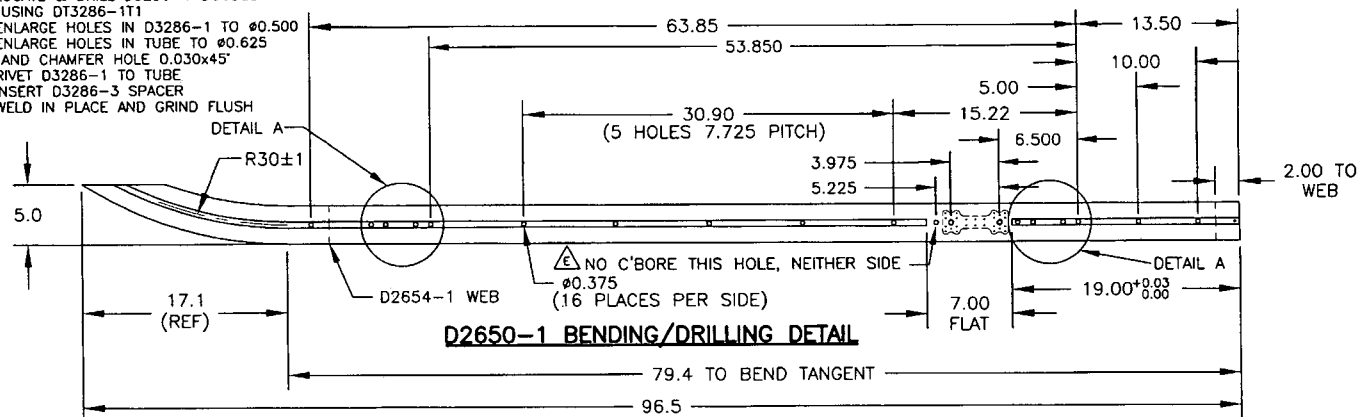
- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313 X 0.75 DEEP

RELEASED

06-04-07



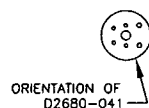
- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO 0.500
  4. ENLARGE HOLES IN TUBE TO 0.625 AND CHAMFER HOLE 0.030x45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH



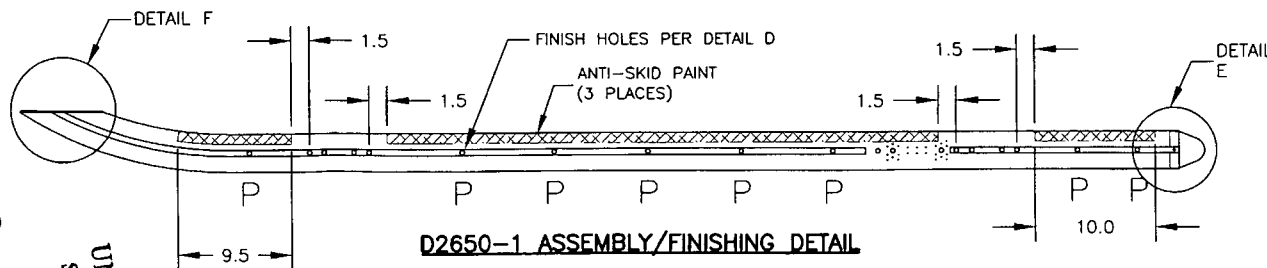
#### DETAIL F (NOT TO SCALE)

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH



REMOVE RIDGE ON INSIDE OF SKIDTUBE LEAVE 0.070 MIN.



NO. 31880A  
WORK ORDER  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
UNCONTROLLED COPY  
ENGINEERING  
RETURN TO  
SHOP COPY

COPYRIGHT © 2004 BY DART AEROSPACE USA, INC.


THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN	CP	DRAWN BY	CP	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA	REV. E
CHECKED	PH	APPROVED	AT	DRAWING NO.	SHEET 2 OF 5
DATE	06.03.30	TITLE	SKIDTUBE	SCALE	1:10







DESIGN	CP	DRAWN BY	CP	 <b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA
CHECKED	HH	APPROVED	CH	
DATE		DRAWING NO.		REV. E
06.03.30		D2650		SHEET 5 OF 5
		TITLE		SCALE
		SKIDTUBE		1:10



NO. 106

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name Barclay Elliott  
Joint Welding Procedure Tig  
Part number and Job number 206642241 / A31880A

TEST WELDS REQUIRED

BASE METAL Alum WELDING PROCESS Tig  
Penetration Complete ☒ Partial ☐ Single Weld ☒ Double Weld ☐  
Current AC ☒ DC ☐ Backing YES ☐ NO ☒

	Position	Vertical	Down <input type="checkbox"/>	Up <input type="checkbox"/>
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	5G <input type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skidtube

TEST RESULTS

Visual Pass ☒ Fail ☐  
Penetration Pass ☒ Fail ☐  
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 07/04/27 Qualifier David Amal